

Exhibit No.: 123  
Issues: Demand Allocator and  
"Unused Energy" Allocator  
Witness: Erin L. Maloney  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Rebuttal Testimony  
Case No.: ER-2006-0314  
Date Testimony Prepared: September 8, 2006

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**REBUTTAL TESTIMONY**

**OF**

**ERIN L. MALONEY**

**KANSAS CITY POWER & LIGHT COMPANY**

**CASE NO. ER-2006-0314**

**Jefferson City, Missouri  
September 2006**

**FILED**

NOV 13 2006

Missouri Public  
Service Commission

~~Staff~~ Exhibit No. 123  
Case No(s). ER-2006-0314  
Date 10-16-06 Rptr XF

**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

In the Matter of the Application of Kansas )  
City Power & Light Company for )  
Approval to Make Certain Changes in its )  
Charges for Electric Service to Begin the )  
Implementation of Its Regulatory Plan )

Case No. ER-2006-0314

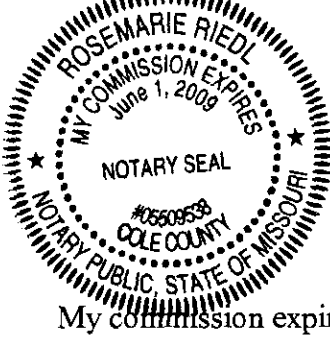
**AFFIDAVIT OF ERIN L. MALONEY**

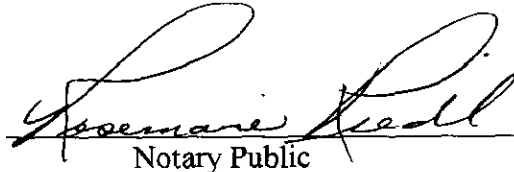
STATE OF MISSOURI     )  
                                      ) ss  
COUNTY OF COLE     )

Erin L. Maloney, of lawful age, on her oath states: that she has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 5 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.

  
Erin L. Maloney

Subscribed and sworn to before me this 8<sup>th</sup> day of September, 2006.



  
Notary Public

My commission expires June 1, 2009

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**OF**

**ERIN L. MALONEY**

**KANSAS CITY POWER & LIGHT COMPANY**

**CASE NO. ER-2006-0314**

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<b>Derivation of the "Unused Energy" Allocator .....</b>	<b>4</b>



Rebuttal Testimony of  
Erin L. Maloney

1           A.     A 4 CP utility is a utility that has high demand during the four summer months  
2     and relatively low demands during the off-peak months. A 12 CP utility will have a relatively  
3     flat load curve with not a lot of statistical variation in peak demand on a month to month  
4     basis.

5           Q.     Does Mr. Frerking explain the reason for selecting a 12 CP methodology in the  
6     Company's derivation of the demand allocator?

7           A.     Mr. Frerking gives no explanation. He states on page 6, lines 4-6 of his direct  
8     testimony that "The Demand allocator is a 12-month average for the coincident peak demands  
9     for the Missouri and Kansas jurisdictional customers and the firm wholesale FERC  
10    jurisdictional customers."

11          Q.     Does the Staff have a foundation for using the 4 CP methodology in this case?

12          A.     Yes, as stated in my direct testimony, the 4 CP methodology is appropriate for  
13    a utility, such as KCP&L, where the monthly peak demands during summer months are  
14    significantly higher than the non-summer monthly peak demands.

15          Q.     Did you present support for the usage of the 4 CP methodology in your direct  
16    testimony?

17          A.     Yes, I performed various monthly peak mathematical tests on the test year data  
18    to make this determination. The Federal Energy Regulatory Commission (FERC) relied upon  
19    and employed these tests in a number of electric utility cases which are cited and attached as  
20    Schedule 1.

21          Q.     Can you please briefly review the FERC jurisdictional demand allocation  
22    methodology tests that you used in your analysis?

Rebuttal Testimony of  
Erin L. Maloney

1           A.     I examined the following three tests and comparisons developed and used by  
2 the FERC for this determination: 1) the on- and off-peak relative demand test, 2) the average  
3 to annual peak demand test, and 3) the low to annual peak demand test. In addition FERC has  
4 used another test - the number of occurrences of off-peak months having higher demand than  
5 peak months and I have included the results of that test in my rebuttal testimony.

6           Q.     What were the results of your analysis?

7           A.     As indicated in my direct testimony, each FERC test and comparison fell  
8 within or below the range of values used by the FERC indicating that the adoption a 4 CP  
9 methodology should be used for KCP&L.

10          Q.     Did you perform any additional analyses using these FERC tests for the  
11 purpose of this rebuttal testimony?

12          A.     Yes. To supplement my earlier analysis of the test year data, I performed the  
13 four FERC tests using the Company's monthly peaks reported on FERC Form 1, page 401b  
14 'Monthly Peaks and Output' for each of the years 1999-2004. The results of these tests and  
15 the system peaks are contained and attached as Schedule 2.

16          Q.     Which jurisdictional demand allocation methodology would be the most  
17 appropriate for KCP&L, based on these analyses and upon the actual historic pattern of  
18 monthly system peak demands?

19          A.     For each of the seven years of data, the test year (2005) and the years 1999-  
20 2004, without exception, the four tests and comparisons yielded a result that fell in or below  
21 the range established and applied by the FERC when adopting a 4 CP methodology.

22          Q.     Has this issue been raised with the Commission in the past?

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Erin L. Maloney

1           A.     Yes, in Case No. ER-83-49, the last KCP&L rate increase case, the Staff, the  
2 Department of Energy (DOE) and the Company agreed to use a four coincidental peak  
3 method to develop the Missouri jurisdictional demand allocation factor. Please see Cary  
4 Featherstone's rebuttal testimony for a recounting of the history of this issue.

5                               **Derivation of the "Unused Energy" Allocator**

6           Q.     What is your understanding of the derivation of the "Unused Energy"  
7 allocator?

8           A.     The "Unused Energy" allocator is used in a method developed by KCP&L to  
9 try to measure the energy that is available for off-system sales. KCP&L first takes the 12 CP  
10 demand average for each jurisdiction and multiplies it by 8760 to get a projected amount of  
11 total "Available Energy". Then, KCP&L subtracts the actual energy that was used by the  
12 individual jurisdictions and calls that the "Unused Energy" per jurisdiction. The "Unused  
13 Energy" allocator is derived by dividing each jurisdictions' "Unused Energy" by the total  
14 amount of "Unused Energy". Please see Lena Mantle's rebuttal testimony regarding the  
15 shortcomings of this method and how this allocator favors jurisdictions with lower load  
16 factors.

17          Q.     Does the "Available Energy" or "Unused Energy" calculated using KCP&L's  
18 method yield a value that relates to actual energy that was available for disposition or the  
19 actual energy that was sold off-system in the year ending December 31, 2005?

20          A.     No. For the test year (2005), the "Available Energy" calculated using  
21 KCP&L's theory was 23,233,216 MWh and the actual total energy available for disposition in  
22 the test year was 20,398,545 MWh. The total "Unused Energy" calculated using their theory  
23 was 7,545,659 MWh while the actual energy that was sold off-system was only 4,468,707

Rebuttal Testimony of  
Erin L. Maloney

1 MWh. Such wide divergence from actual experience demonstrates the complete inadequacy  
2 of the method for the purpose of setting rates.

3 Q. Is there any other problem with the Company's derivation of the "Unused  
4 Energy" allocator?

5 A. Yes, the Company's theory to derive this allocator is based on a 12 CP demand  
6 average. In any case that a demand allocator is being derived I would recommend the use of a  
7 4 CP average not a 12 CP average.

8 Q. By making these observations about the Company's use of a 12 CP average in  
9 the derivation of the "Unused Energy" allocator, are you endorsing the use of this "Unused  
10 Energy" allocator in this case?

11 A. No, I do not recommend the use of the "Unused Energy" allocator. For further  
12 discussion on the "Unused Energy" allocator, see the rebuttal testimonies of Staff witnesses  
13 Mantle and Featherstone.

14 Q. Does this conclude your prepared Rebuttal Testimony?

15 A. Yes, it does.



**FERC System Demand Test # 1 - Difference in Average of Peak Months to Non-Peak Months as Percentage of Annual Peak**

Company	FERC Reference	Year Comment
Louisiana Power & Light Co.	Opinion No. 813, 59 FPC 968	1977 31% difference 4 CP
Louisiana Power & Light Co.	Opinion No. 110, 14 FERC 61,075	1981 26% difference 4 CP
Lockhart Power Co.	Opinion No. 29, 4 FERC 61,337	1978 18% difference 12 CP
Illinois Power Co. Commonwealth Edison Co.	11 FERC at 65,248	19% difference 12 CP
Southwestern Public Service Co.	15 FERC at 65,196 18 FERC at 65,034	16.4%-24.9% differences 4 CP average difference of 22.9%, high of 28.3% 3 CP

**FERC System Demand Test # 2 - Average of the Monthly Peaks as a Percentage of the Annual Peak**

Company	FERC Reference	Year Comment
Illinois Power Co.	11 FERC at 65,248-49	81% 12 CP
El Paso Electric Co.	Opinion No. 109, 14 FERC 61,082	1981 84% 12 CP
Lockhart Power Co.	Opinion No. 29, 4 FERC 61,337	1978 84% 12 CP
Southern California Edison Co.	Opinion No. 821, 59 FPC 2167	1977 87.8% 12 CP
Louisiana Power & Light Co. Commonwealth Edison Co.	Opinion No. 110, 14 FERC 61,075	1981 81.2% 4 CP
Southwestern Public Service Co.	15 FERC at 65,198 18 FERC at 65,035	79.4%-79.5% 4 CP 80.1% 3 CP
Delmarisa Power & Light Co.	17 FERC at 65,202	83.3% 12 CP

**FERC System Demand Test # 3 - Lowest Monthly Peak as a Percentage of the Annual Peak**

Company	FERC Reference	Year Comment
Louisiana Power & Light Co.	Opinion No. 813, 59 FPC 968	1977 56% 4 CP
Idaho Power Co.	Opinion No. 13, 3 FERC 61,108	1978 58% 3 CP
Southwestern Electric Power Co.	Opinion No. 28, 4 FERC 61,330	1978 55.8% 4 CP
Lockhart Power Co.	Opinion No. 29, 4 FERC 61,337	1978 73% - 12 CP
Southern California Edison Co.	Opinion No. 821, 59 FPC 2167	1977 79% 12 CP
Alabama Power Co.	Opinion No. 54, 8 FERC 61,083	1979 75% 12 CP
Illinois Power Co.	11 FERC at 65,248	66% 12 CP

FERC References

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Commonwealth Edison Co.	15 FERC at 65,198	64.6%-67.8% 4 CP
Louisiana Power & Light Co.	Opinion 110, 14 FERC 61,075	1981 61.9% 4 CP
El Paso Electric Co.	Opinion No. 109, 14 FERC 61,082	1981 71% 12 CP
Carolina Power & Light Co.	Opinion No. 19, 4 FERC 61,107	1978 72% 12 CP
New England Power Co.	Opinion No. 803, 58 FPC 2322	1977 80% 12 CP
Southwestern Public Service Co.	18 FERC at 65,034	on average almost 67% 3 CP
Delmarisa Power & Light Co.	17 FERC at 65,201	71.4% 12 CP

## Results of FERC analyses:

**Monthly Peaks and Output**

1999

**Monthly Peak**

Month	Total Monthly Energy	Monthly Non-Requirements		Day of Month	Hour
		Sales for Resale & Associated Losses	MW		
January	1,563,152	356,251	2,171	4	600
February	1,176,684	177,812	1,954	22	600
March	1,246,938	161,520	1,859	8	2300
April	1,105,152	99,204	1,778	8	1300
May	1,258,442	188,468	1,910	28	1500
June	1,415,667	107,956	2,766	7	1,600
July	1,791,349	99,463	3,251	29	1,500
August	1,612,177	98,252	3,087	12	1,500
September	1,349,442	178,662	2,961	2	1,600
October	1,300,729	237,845	1,963	12	1,400
November	1,243,383	207,853	1,812	30	1,800
December	1,383,488	212,097	2,085	21	1,800

**FERC System Demand Test #1-Difference in Average  
Demand in Peak Months and Average Demand in Non\_Peak  
Months as percentage of Annual Peak**

3,016 0.927791449 **4 CP Range:**  
1,942 0.597200861 **33.06% 26-31%**

**FERC System Demand Test #2- Average of Monthly Peak  
Demands as Percentage of Annual Peak**

2,300 0.707397724 **70.74% 78-81%**

**FERC System Demand Test #3 - Lowest Monthly Peak as  
Percentage of Annual Peak**

1,778 0.546908643 **54.69% 55-60%**

**FERC System Demand Test #4 - What extent do peak**

*Demand in non-peak months never exceed demand in peak months.*

Peak Demands:	2,766 Non_Peak De	2,171
	3,251	1,954
	3,087	1,859
	2,961	1,778
		1,910
		1,963
		1,812
		2,085

Monthly Peaks and Output 2000		Monthly Peak	
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Month	Total Monthly Energy	Monthly Non-Requirements		Day of Month	Hour
		Sales for Resale & Associated Losses	MW		
January	1363574	175338	2026	27	1800
February	1217835	145679	1937	1	1900
March	1246474	163401	1776	2	1800
April	1141485	129583	1885	19	1600
May	1358703	139379	2936	31	1500
June	1463360	134527	2958	1	1500
July	1741886	137847	3230	10	1600
August	1868379	111742	3374	28	1500
September	1477478	128947	3269	11	1500
October	1250220	120744	2352	3	1500
November	1260585	115162	2045	20	1800
December	1422641	86139	2382	18	1800

**FERC System Demand Test #1-Difference in Average  
Demand in Peak Months and Average Demand in Non\_Peak  
Months as percentage of Annual Peak**

3,208	0.950726141	<b>4 CP Range: 30.84% 26-31%</b>
2,167	0.642375519	

**FERC System Demand Test #2- Average of Monthly Peak  
Demands as Percentage of Annual Peak**

2,514	0.745159059	<b>74.52% 78-81%</b>
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**FERC System Demand Test #3 - Lowest Monthly Peak as  
Percentage of Annual Peak**

1,776	0.526378186	<b>52.64% 55-60%</b>
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**FERC System Demand Test #4 - What extent do peak  
Demand in non-peak months never exceed demand in peak months.**

Peak Demands:	2958 Non_Peak De	2026
	3230	1937
	3374	1776
	3269	1885
		2936
		2352
		2045
		2382

Monthly Peaks and Output 2001							
Monthly Non-Requirements				Monthly Peak			
Month	Total Monthly Energy	Sales for Resale & Associated Losses	MW	Day of Month	Hour		
January	1,422,218	158,181	2,233	2	1,800		
February	1,221,389	99,089	2,147	2	1,900		
March	1,247,236	137,941	1,981	1	1,800		
April	1,294,726	261,422	1,988	27	1,500		
May	1,352,380	200,288	2,579	16	1,900		
June	1,583,570	269,618	2,858	11	1,600		
July	1,939,234	234,086	3,304	30	1,600		
August	1,865,699	259,262	3,352	9	1,500		
September	1,587,205	431,511	2,722	4	1,600		
October	1,572,350	504,867	1,920	3	1,600		
November	1,486,552	455,401	1,988	28	1,800		
December	1,569,545	419,798	1,934	26	1,800		
	18,142,104						

**FERC System Demand Test #1-Difference in Average**

**Demand in Peak Months and Average Demand in Non\_Peak Months as percentage of Annual Peak**

3,059	0.912589499	<b>28.72%</b>	<b>26-31%</b>
2,096	0.625372912		

**4 CP Range:****FERC System Demand Test #2- Average of Monthly Peak**

**Demands as Percentage of Annual Peak**

2,417	0.721111774	<b>72.11%</b>	<b>78-81%</b>
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**FERC System Demand Test #3 - Lowest Monthly Peak as Percentage of Annual Peak**

1,920	0.572792363	<b>57.28%</b>	<b>55-60%</b>
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**FERC System Demand Test #4 - What extent do peak**

**Demand in non-peak months never exceed demand in peak months**

Peak Demands:	2,858	Non_Peak De	2,233
	3,304		2,147
	3,352		1,981
	2,722		1,988
			2,579
			1,920
			1,988
			1,934

Monthly Peaks and Output 2002				Monthly Peak	
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Month	Total Monthly Energy	Monthly Non-Requirements		Day of Month	Hour
		Sales for Resale & Associated Losses	MW		
January	1,508,893	335,406	2,105	2	1800
February	1,249,993	223,083	2,095	26	1900
March	1,371,497	251,567	2,036	4	1900
April	1,284,996	243,342	2,131	18	1700
May	1,480,099	376,185	2,779	31	1600
June	1,769,785	320,952	3,083	26	1600
July	1,958,303	264,713	3,335	26	1600
August	1,925,955	313,545	3,333	1	1600
September	1,794,163	446,543	3,139	6	1500
October	1,788,701	674,415	2,665	1	1600
November	1,798,934	714,958	1,957	25	1800
December	1,858,111	673,956	2,055	3	1800
	19,789,430				

**FERC System Demand Test #1-Difference in Average  
Demand in Peak Months and Average Demand in Non\_Peak  
Months as percentage of Annual Peak**

3,223	0.966266867	<b>4 CP Range:</b>
2,228	0.668028486	<b>29.82% 26-31%</b>

**FERC System Demand Test #2- Average of Monthly Peak  
Demands as Percentage of Annual Peak**

2,559	0.767441279	<b>76.74% 78-81%</b>
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**FERC System Demand Test #3 - Lowest Monthly Peak as  
Percentage of Annual Peak**

1,957	0.586806597	<b>58.68% 55-60%</b>
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**FERC System Demand Test #4 - What extent do peak  
Demand in non-peak months never exceed demand in peak months**

Peak Demands:	3,083 Non_Peak De	2,105
	3,335	2,095
	3,333	2,036
	3,139	2,131
		2,779
		2,665
		1,957
		2,055

Monthly Peaks and Output 2003				Monthly Peak			
Month	Total Monthly Energy	Monthly Non-Requirements Sales for Resale & Associated Losses	MW	Day of Month	Hour		
January	1,844,970	585,013	2,268	22	1,800		
February	1,577,368	458,006	2,165	24	1,900		
March	1,538,134	412,935	2,095	5	1,900		
April	1,356,318	307,688	2,011	30	1,600		
May	1,624,735	512,862	2,556	30	1,600		
June	1,791,114	491,717	3,109	24	1,500		
July	2,135,605	376,884	3,426	18	1,600		
August	2,131,679	403,757	3,610	21	1,500		
September	1,749,402	582,026	2,617	10	1,500		
October	1,627,619	533,886	2,018	20	1,500		
November	1,475,096	373,006	1,994	24	1,800		
December	1,843,091	606,748	2,186	10	1,800		

**FERC System Demand Test #1-Difference in Average  
Demand in Peak Months and Average Demand in Non\_Peak  
Months as percentage of Annual Peak**

3,191	0.883795014	<b>4 CP Range:</b>
2,162	0.598788089	<b>28.50% 26-31%</b>

**FERC System Demand Test #2- Average of Monthly Peak  
Demands as Percentage of Annual Peak**

2,505	0.693790397	<b>69.38% 78-81%</b>
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**FERC System Demand Test #3 - Lowest Monthly Peak as  
Percentage of Annual Peak**

1,994	0.552354571	<b>55.24% 55-60%</b>
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**FERC System Demand Test #4 - What extent do peak**

***Demand in non-peak months never exceed demand in peak months***

Peak Demands:	3,109 Non_Peak De	2,268
	3,426	2,165
	3,610	2,095
	2,617	2,011
		2,556
		2,018
		1,994
		2,186

Monthly Peaks and Output 2004				Monthly Peak		
Month	Total Monthly Energy	Monthly Non-Requirements Sales for Resale & Associated Losses	MW	Day of Month	Hour	
January	1,916,295	615,155	2,335	5	1800	
February	1,656,914	479,027	2,235	2	1800	
March	1,709,685	587,935	1,858	4	1800	
April	1,682,482	632,680	1,895	16	1500	
May	1,759,348	500,885	2,734	20	1700	
June	1,779,498	462,669	3,009	14	1600	
July	1,975,562	452,171	3,384	13	1600	
August	1,893,856	461,970	3,376	3	1600	
September	1,810,414	506,981	2,874	14	1600	
October	1,726,793	623,132	1,977	29	1400	
November	1,672,085	555,063	2,129	30	1800	
December	1,872,856	590,503	2,376	22	1800	

**FERC System Demand Test #1-Difference in Average  
Demand in Peak Months and Average Demand in Non\_Peak  
Months as percentage of Annual Peak**

3,161	0.934027778	<b>4 CP Range:</b>
2,192	0.647864953	<b>28.62% 26-31%</b>

**FERC System Demand Test #2- Average of Monthly Peak  
Demands as Percentage of Annual Peak**

2,515	0.743252561	<b>74.33% 78-81%</b>
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**FERC System Demand Test #3 - Lowest Monthly Peak as  
Percentage of Annual Peak**

1,858	0.549054374	<b>54.91% 55-60%</b>
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**FERC System Demand Test #4 - What extent do peak  
Demand in non-peak months never exceed demand in peak months**

Peak Demands:	3,009 Non_Peak De	2,335
	3,384	2,235
	3,376	1,858
	2,874	1,895
		2,734
		1,977
		2,129
		2,376



Monthly Peaks and Output 2005			Monthly Peak			
Month	Total Monthly Energy	Monthly Non-Requirements Sales for Resale & Associated Losses	MW	Day of Month	Hour	
January	1,823,646	480,348	2,313	14	1900	
February	1,489,763	382,163	2,186	8	1800	
March	1,476,585	312,887	2,003	1	1900	
April	1,467,612	394,798	2,042	21	1600	
May	1,504,975	288,453	2,615	23	1700	
June	1,841,312	324,370	3,338	27	1500	
July	2,055,089	344,204	3,512	22	1600	
August	1,971,721	313,998	3,426	10	1600	
September	1,646,712	218,774	3,007	21	1700	
October	1,771,963	584,338	2,754	4	1600	
November	1,649,130	497,413	2,209	28	1800	
December	1,700,067	326,961	2,563	7	1800	
	20,398,575	4,468,707				

**FERC System Demand Test #1-Difference in Average  
Demand in Peak Months and Average Demand in Non\_Peak  
Months as percentage of Annual Peak**

3,321	0.94554385
2,336	0.665041287

**4 CP Range:**  
**28.05% 26-31%**

**FERC System Demand Test #2- Average of Monthly Peak  
Demands as Percentage of Annual Peak**

2,664	0.758542141
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**75.85% 78-81%**

**FERC System Demand Test #3 - Lowest Monthly Peak as  
Percentage of Annual Peak**

2,003	0.570330296
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**57.03% 55-60%**

**FERC System Demand Test #4 - What extent do peak**

***Demand in non-peak months never exceed demand in peak months***

Peak Demands:	3,338 Non_Peak De	2,313
	3,512	2,186
	3,426	2,003
	3,007	2,042
		2,615
		2,754
		2,209
		2,563